# DVP-CX850D

## RMT-D113A

# SERVICE MANUAL

*US Model*
*Canadian Model*

Self Diagnosis Supported model

## SPECIFICATIONS

### CD/DVD player

**Laser** Semiconductor laser
**Signal format system**
NTSC

### Audio characteristics

**Frequency response**
DVD (PCM 96 kHz): 2 Hz to 44 kHz (±1 dB)*
DVD (PCM 48 kHz): 2 Hz to 22 kHz (±0.5 dB)
CD: 2 Hz to 20 kHz (±0.5 dB)
**Signal-to-noise ratio**
More than 115 dB (LINE OUT (AUDIO 1, 2) connectors only)
**Harmonic distortion**
Less than 0.0025%
**Dynamic range**
More than 100 dB (DVD)
More than 97 dB (CD)
**Wow and flutter**
Less than detected value (±0.001% W PEAK)

### Outputs and inputs

| | Jack type | Output/Input level | Load impedance |
|---|---|---|---|
| LINE OUTPUT (AUDIO 1, 2) | Phono jacks | 2 Vrms (at 50 kilohms) | Over 10 kilohms |
| DIGITAL OUTPUT (OPTICAL) | Optical output connector | –18 dBm | Wave length: 660 nm |
| DIGITAL OUTPUT (COAXIAL) | Phono jack | 0.5 Vp-p | 75 ohms terminated |

| | Jack type | Output/Input level | Load impedance |
|---|---|---|---|
| LINE OUTPUT (VIDEO 1, 2) | Phono jacks | 1.0 Vp-p | 75 ohms, sync negative |
| S VIDEO OUTPUT (1, 2) | 4-pin mini DIN | Y: 1.0 Vp-p<br>C: 0.286 Vp-p | 75 ohms, sync negative<br>75 ohms terminated |
| COMPONENT VIDEO OUTPUT (Y, PB/B-Y, PR/R-Y) | Phono jacks | Y: 1.0 Vp-p<br>PB/B-Y, PR/R-Y: 0.7 Vp-p | 75 ohms, sync negative<br>75 ohms |
| 5.1CH OUTPUT | Phono jacks | 2 Vrms (at 50 kilohms) | Over 10 kilohms |
| S-LINK | Mini jack | – | – |
| MEGA CONTROL | Mini jack | – | – |
| AUDIO INPUT | Phono jack | 2 Vrms | 47 kilohms |

### General

**Power requirements (indicated on the rear panel)**
120 V AC, 60 Hz
**Power consumption**
18 W
**Dimensions (approx.)**
430 × 198 × 503 mm (17 × 7 7/8 × 19 7/8 in.) (w/h/d) incl. projecting parts
**Mass (approx.)**
10 kg (22 lb 1 oz)
**Operating temperature**
41 °F to 95 °F (5 °C to 35 °C)
**Operating humidity**
5% to 90%

### Supplied accessories

- Audio/video/S-link connecting cord (1)
- S video cord (1)
- Remote commander (remote) RMT-D113A (1)
- Size AA (R6) batteries (2)

* *The signals from LINE OUTPUT (AUDIO 1, 2 ) connectors and 5.1 ch L, R connectors are measured. When you play the PCM sound tracks with 96 kHz sampling frequency, the output signals from the DIGITAL OUTPUT (OPTICAL, COAXIAL) are converted to 48 kHz (sampling frequency).*

Design and specifications are subject to change without notice.

ENERGY STAR® is a U.S. registered mark.
As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

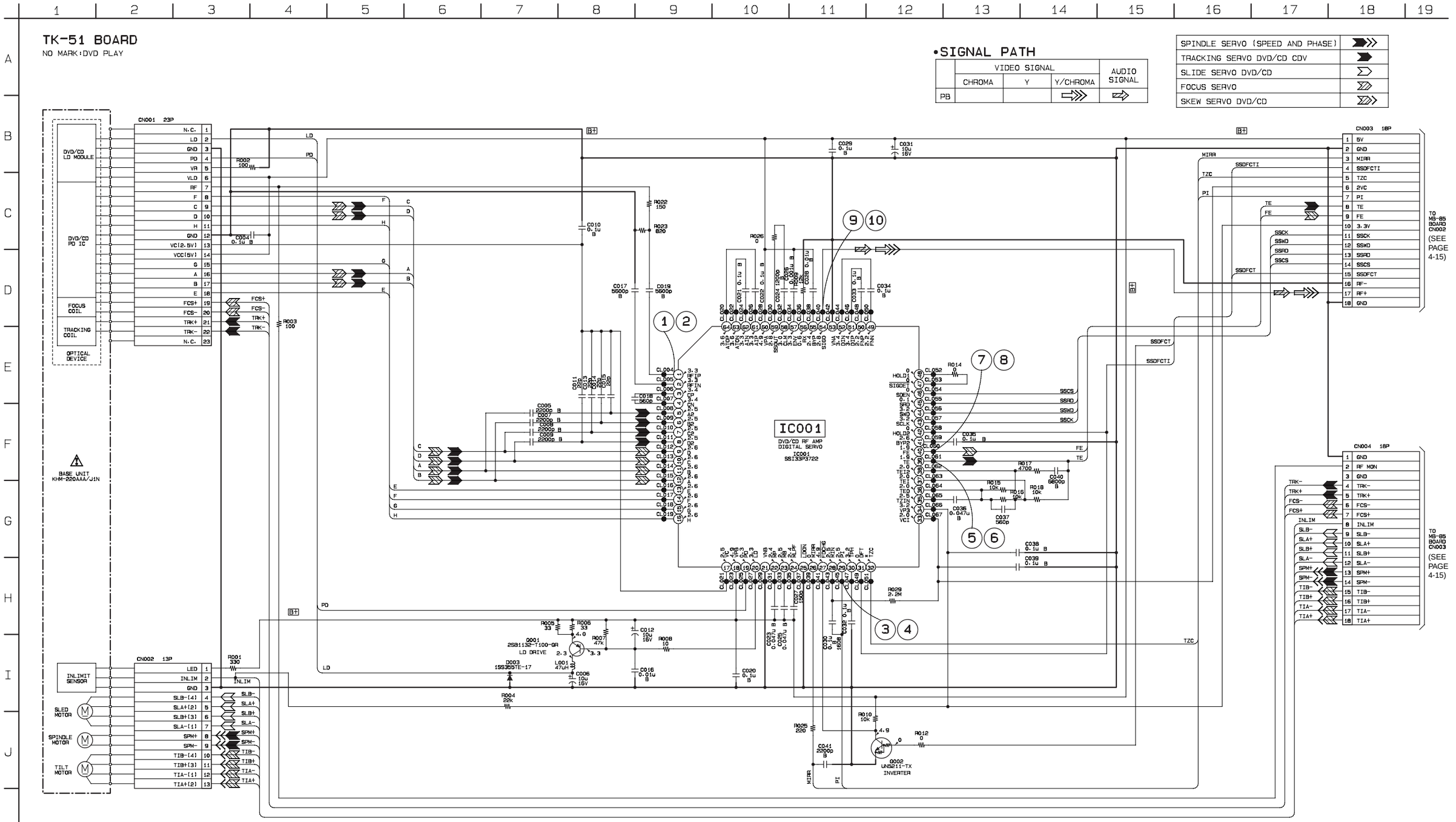
DVD VIDEO COMPACT disc DIGITAL VIDEO **CD/DVD PLAYER**

MICROFILM

SONY®

## TK-51 (RF/SERVO) SCHEMATIC DIAGRAM

— Ref. No. TK-51 Board; 5,000 Series —



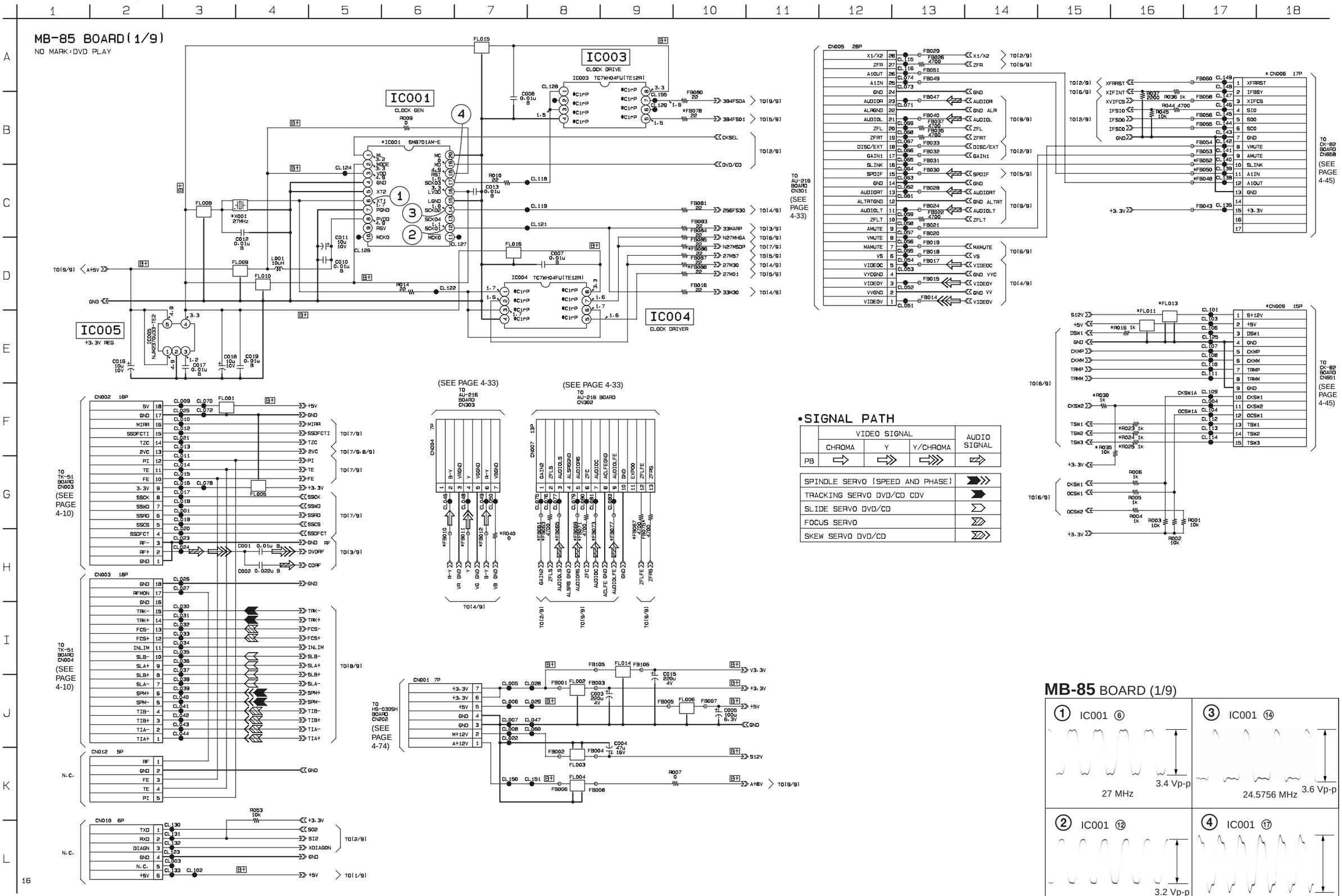

| Note: | Note: |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

## MB-85 (INTER FACE) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

• Refer to page 4-11 for printed wiring board.

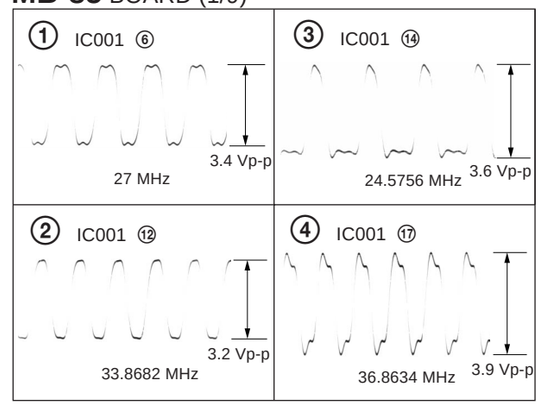



## •SIGNAL PATH

| | VIDEO SIGNAL | | | AUDIO SIGNAL |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| PB | ⇨ | ⇨ | ⇨ | ⇨ |

| | |
|---|---|
| SPINDLE SERVO (SPEED AND PHASE) | ⇨ |
| TRACKING SERVO DVD/CD CDV | ⇨ |
| SLIDE SERVO DVD/CD | ⇨ |
| FOCUS SERVO | ⇨ |
| SKEW SERVO DVD/CD | ⇨ |

## MB-85 BOARD (1/9)

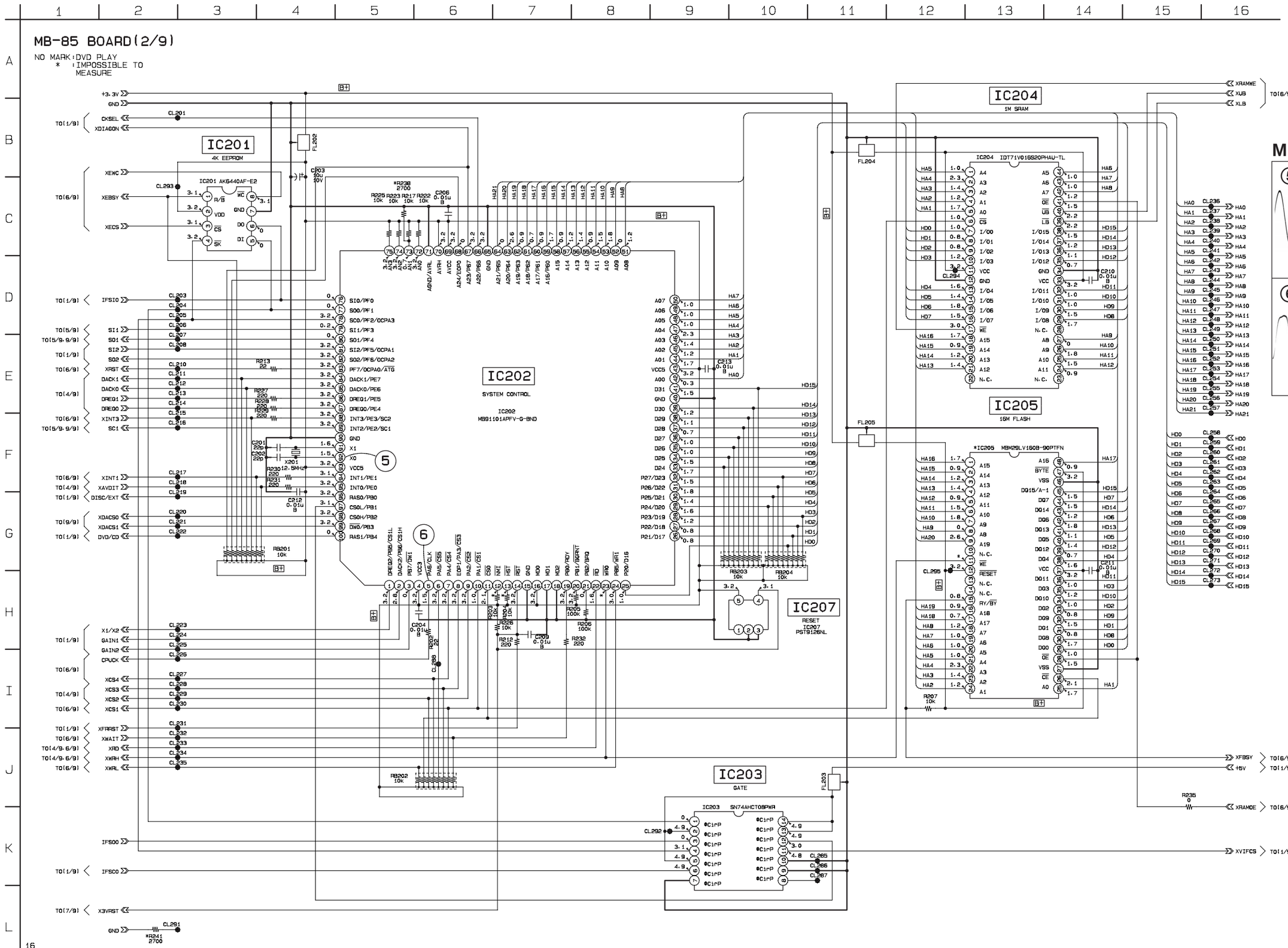


## MB-85 (SYSTEM CONTROL) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

• Refer to page 4-11 for printed wiring board.




**MB-85** BOARD (2/9)

⑤ IC202 92

12.416 MHz 2.1 Vp-p

⑥ IC202 ⑤

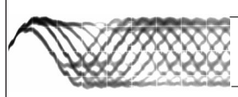
24.884 MHz 3.0 Vp-p

**MB-85 (ARP) SCHEMATIC DIAGRAM**
— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**
• Refer to page 4-11 for printed wiring board.

**MB-85** BOARD (3/9)

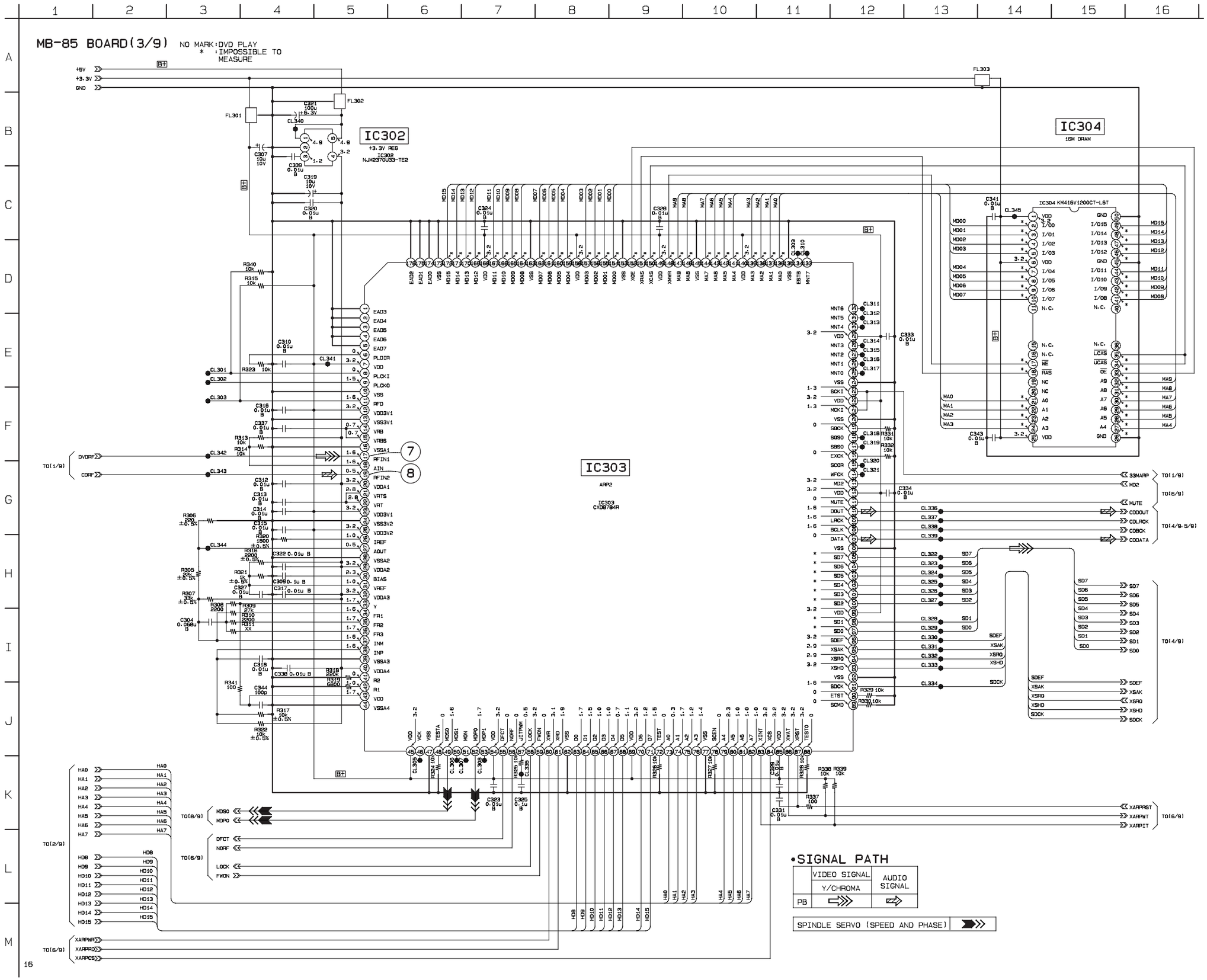
⑦ IC303 ⑰ (DVD play)



50 nsec/div 1.4 Vp-p
0.5 V/div

⑧ IC303 ⑲ (CD play)

0.2 µsec/div 1.4 Vp-p
0.5 V/div

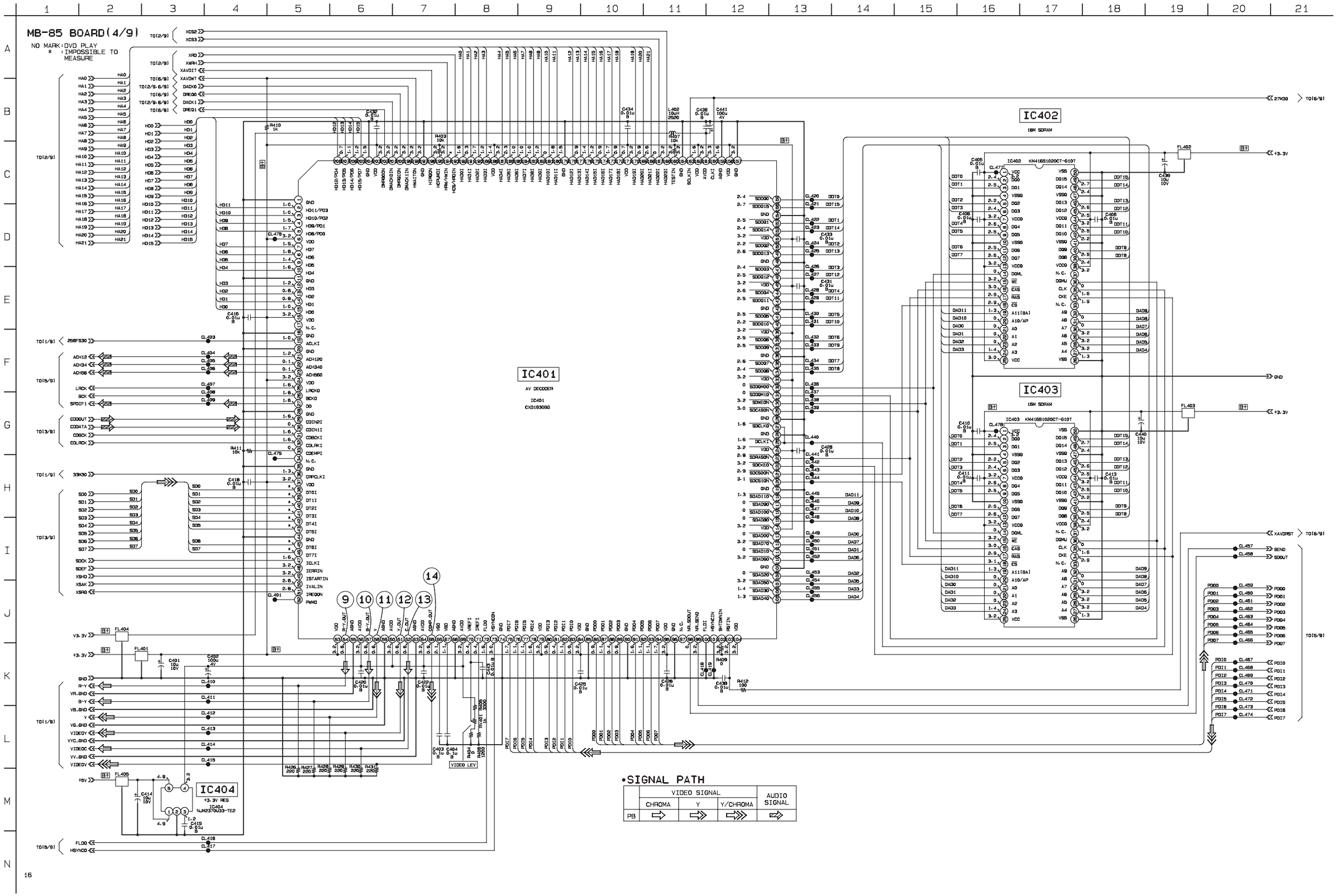


## MB-85 (AV DECODER) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

- Refer to page 4-11 for printed wiring board.
- Refer to page 4-23 for waveforms.

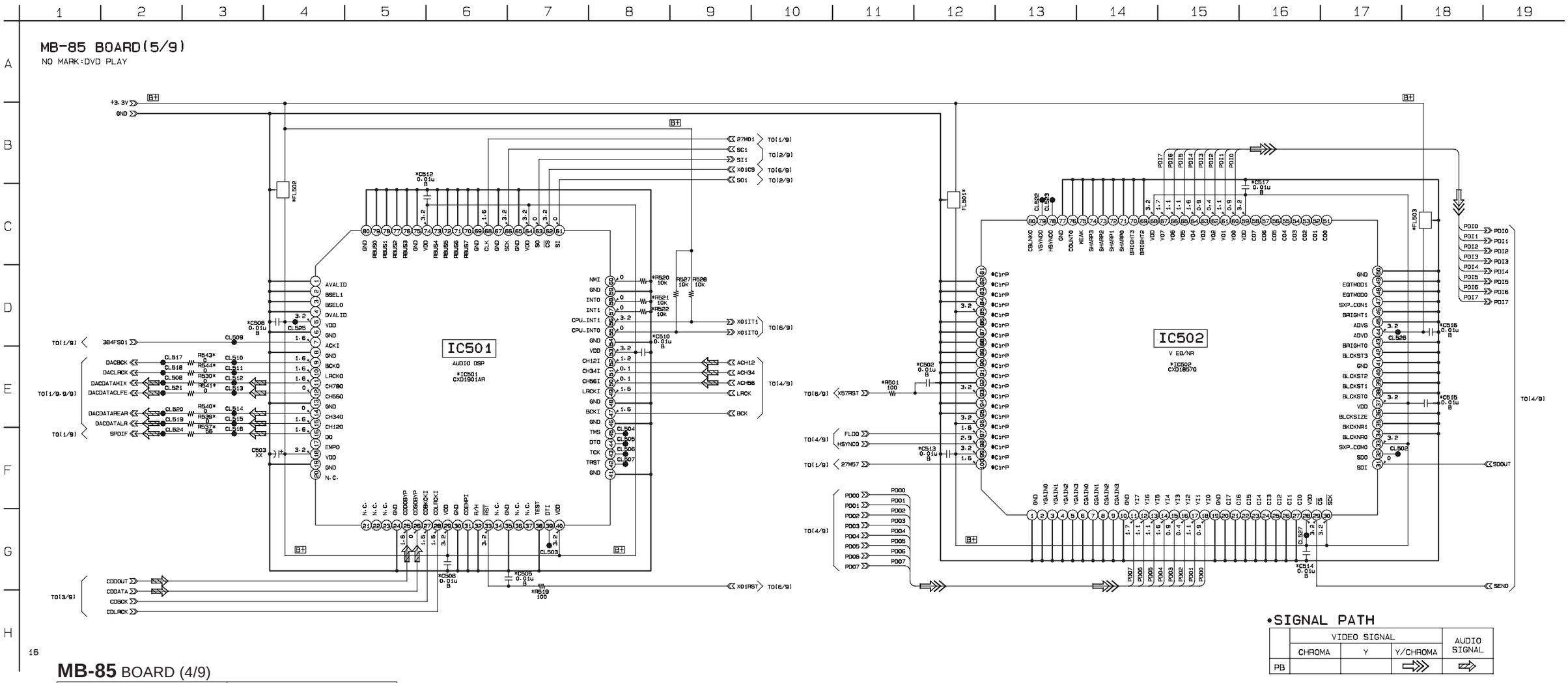


## MB-85 (AUDIO DSP, V EQ/NR) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

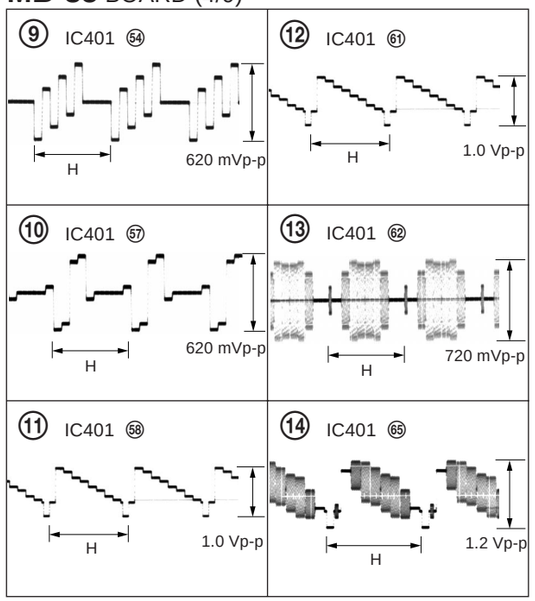
• Refer to page 4-11 for printed wiring board.




•SIGNAL PATH

| | VIDEO SIGNAL | | | AUDIO SIGNAL |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| PB | | | ⇨ | ⇨ |

## MB-85 BOARD (4/9)

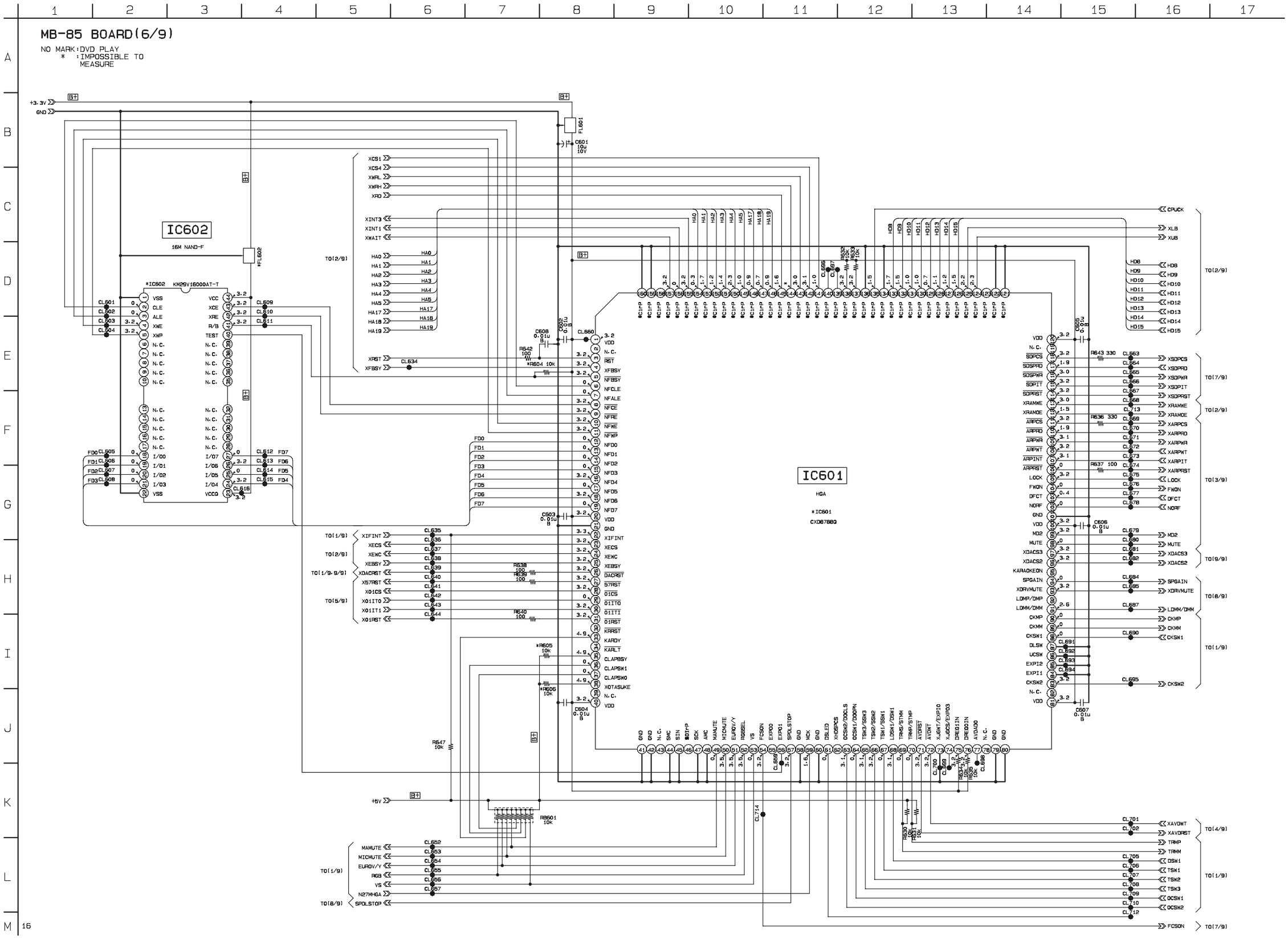


## MB-85 (HGA) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

• Refer to page 4-11 for printed wiring board.








**HGA**
**MB-85 (6/9)**

## MB-85 (SERVO DSP) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

• Refer to page 4-11 for printed wiring board.

MB-85 BOARD(7/9)

NO MARK:DVD PLAY

IC701

SERVO DSP

*IC701
CXD8791Q

IC702

SLED ERR/POWER SUPPLY

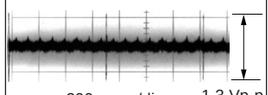
•SIGNAL PATH

| | |
|---|---|
| SPINDLE SERVO (SPEED AND PHASE) | |
| TRACKING SERVO DVD/CD CDV | |
| SLIDE SERVO DVD/CD | |
| FOCUS SERVO | |

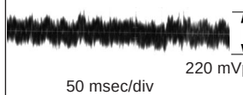
**MB-85** BOARD (7/9)

⑮ IC701 ㊾ (DVD play)

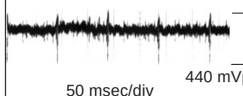
⑯ IC701 ㊾ (CD play)




⑰ IC701 ㊽ (DVD play)




⑱ IC701 ㊽ (CD play)

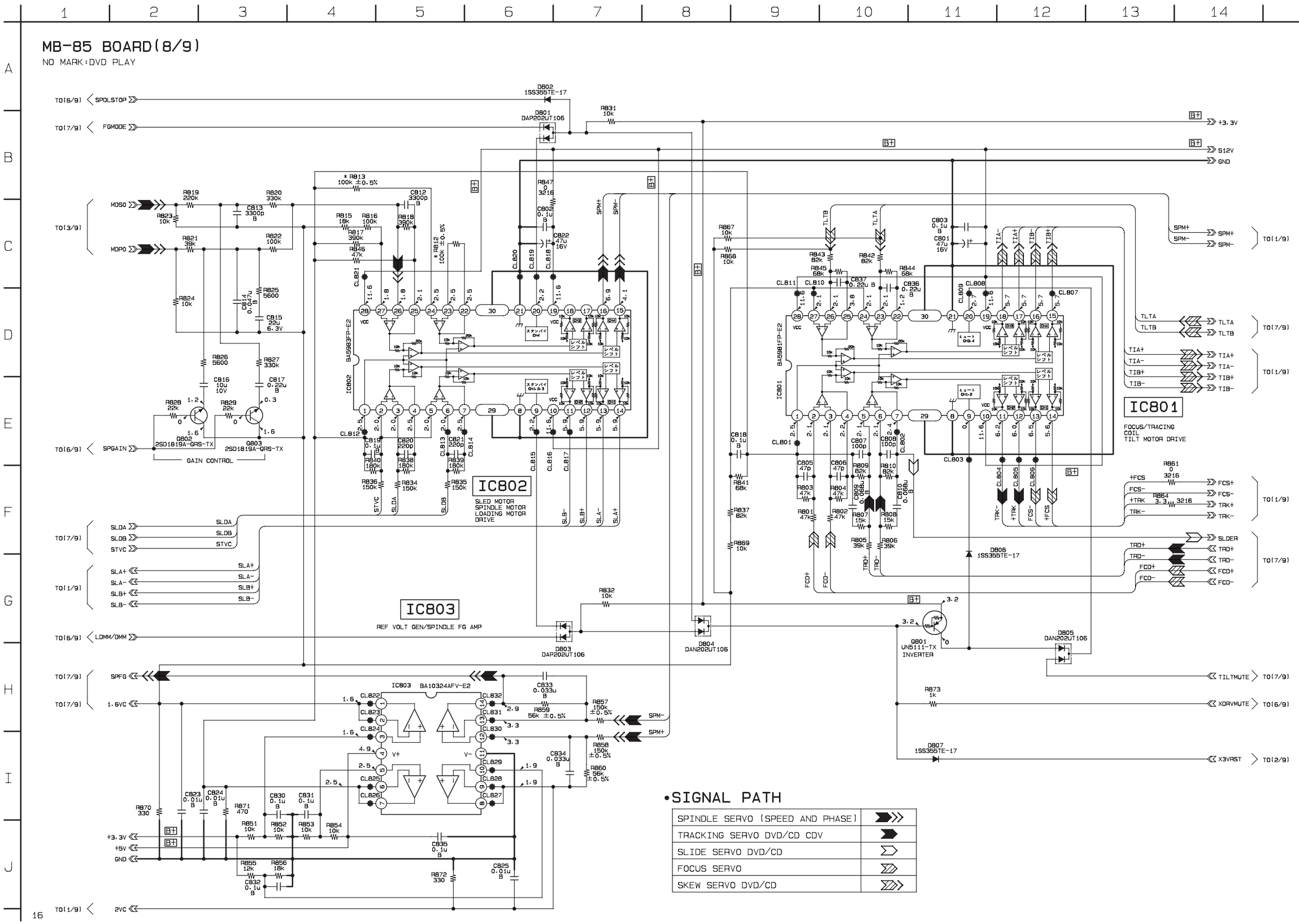


**MB-85 (DRIVE) SCHEMATIC DIAGRAM**
— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**
• Refer to page 4-11 for printed wiring board.

## MB-85 BOARD(8/9)

NO MARK:DVD PLAY




• SIGNAL PATH

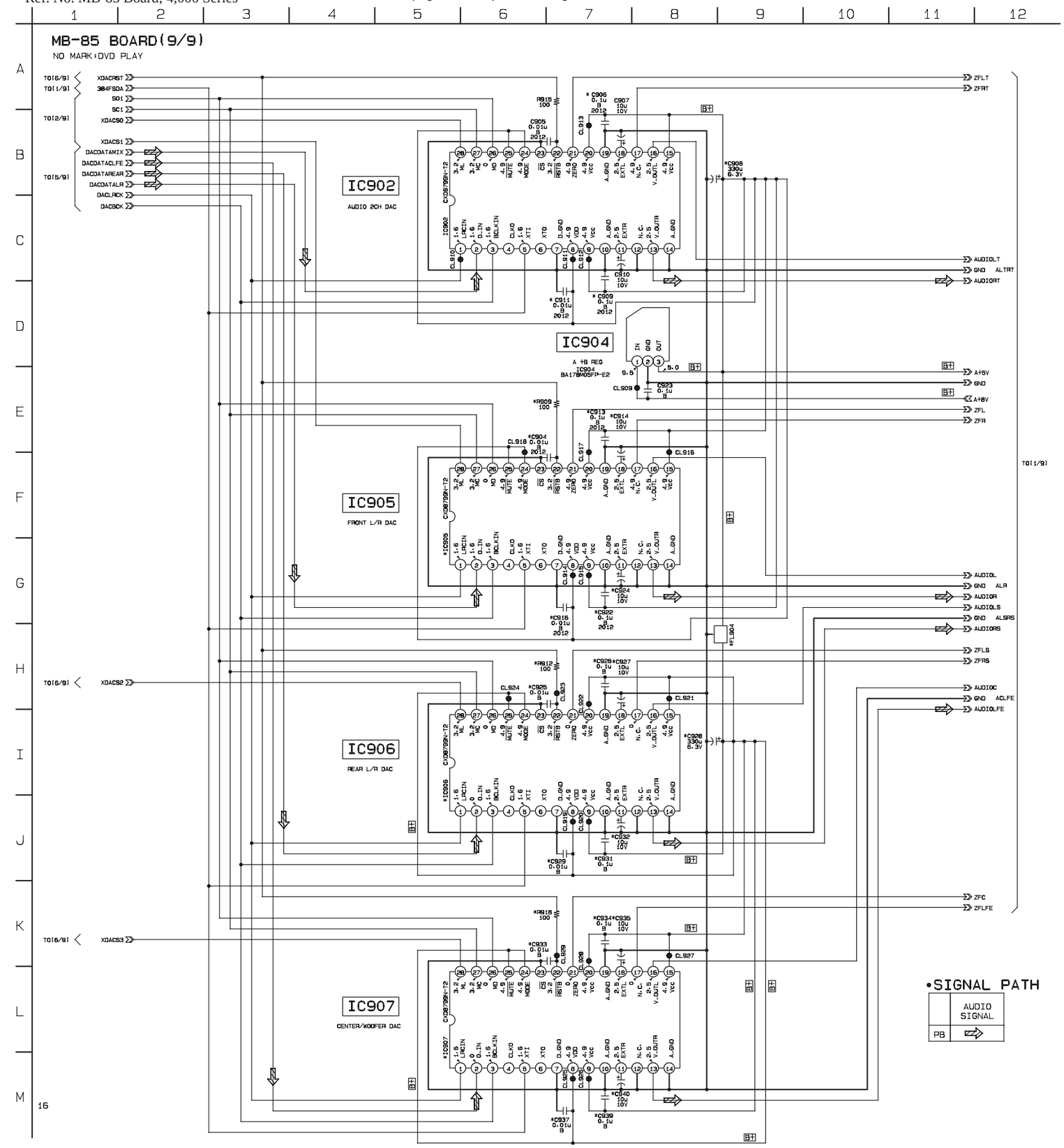
| | |
|---|---|
| SPINDLE SERVO (SPEED AND PHASE) | |
| TRACKING SERVO DVD/CD CDV | |
| SLIDE SERVO DVD/CD | |
| FOCUS SERVO | |
| SKEW SERVO DVD/CD | |

## MB-85 (DAC) SCHEMATIC DIAGRAM

— Ref. No. MB-85 Board; 4,000 Series —

**For schematic diagram**

• Refer to page 4-11 for printed wiring board.



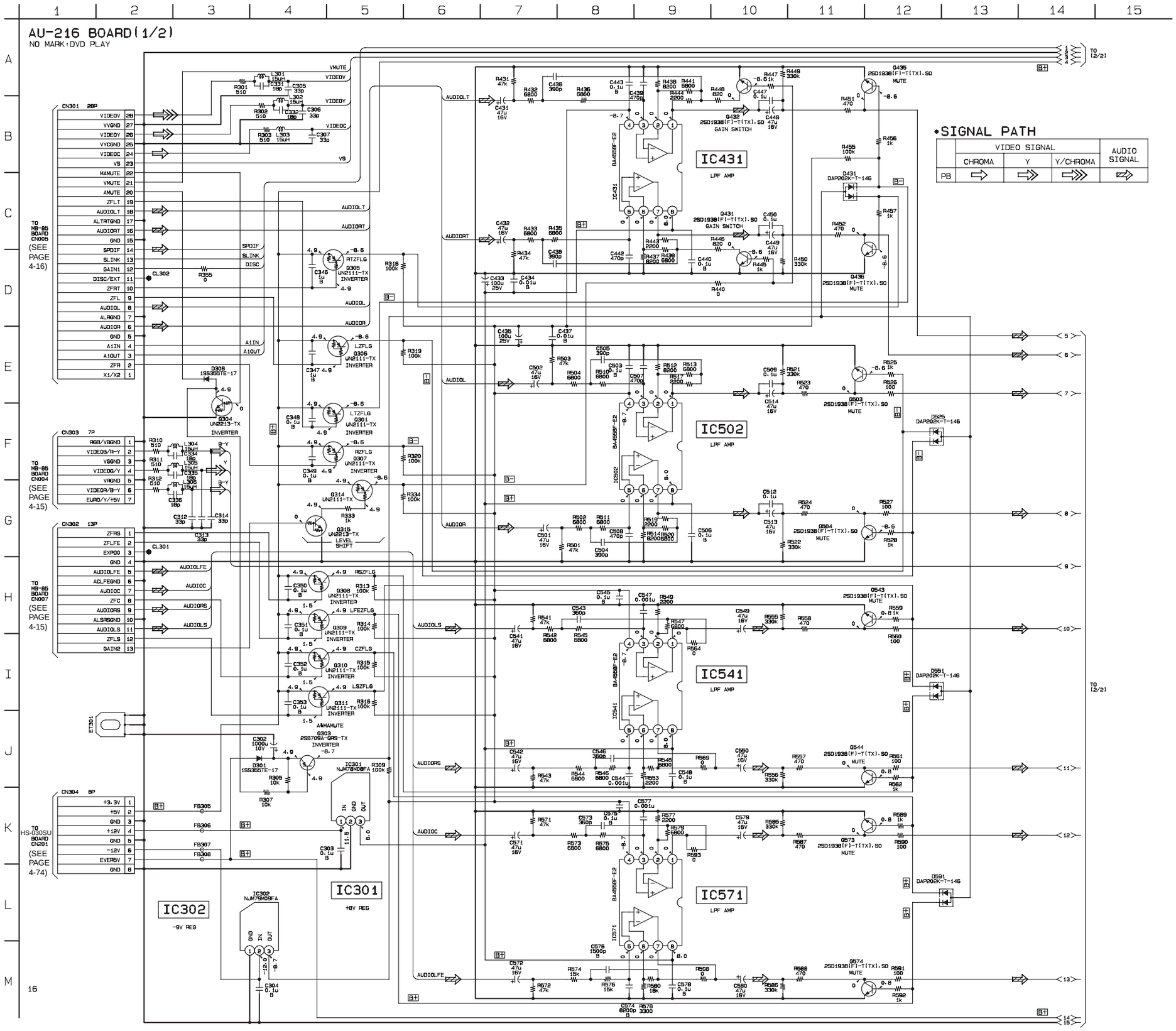

**DAC**
**MB-85 (9/9)**

## AU-216 (LPF AMP) SCHEMATIC DIAGRAM

— Ref. No. AU-216 Board; 1,000 Series —

**For schematic diagram**

• Refer to page 4-37 for printed wiring board.

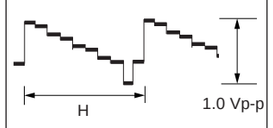


## AU-216 (VIDEO AMP) SCHEMATIC DIAGRAM

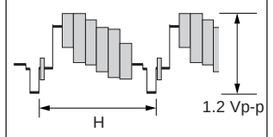
— Ref. No. AU-216 Board; 1,000 Series —

### AU-216 BOARD (2/2)

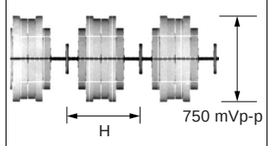
① IC321 ②



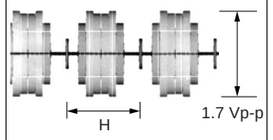

② IC321 ④



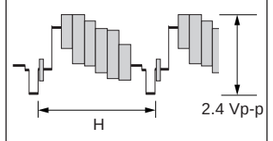

③ IC321 ⑦



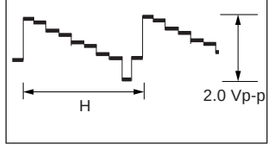

④ IC321 ⑩

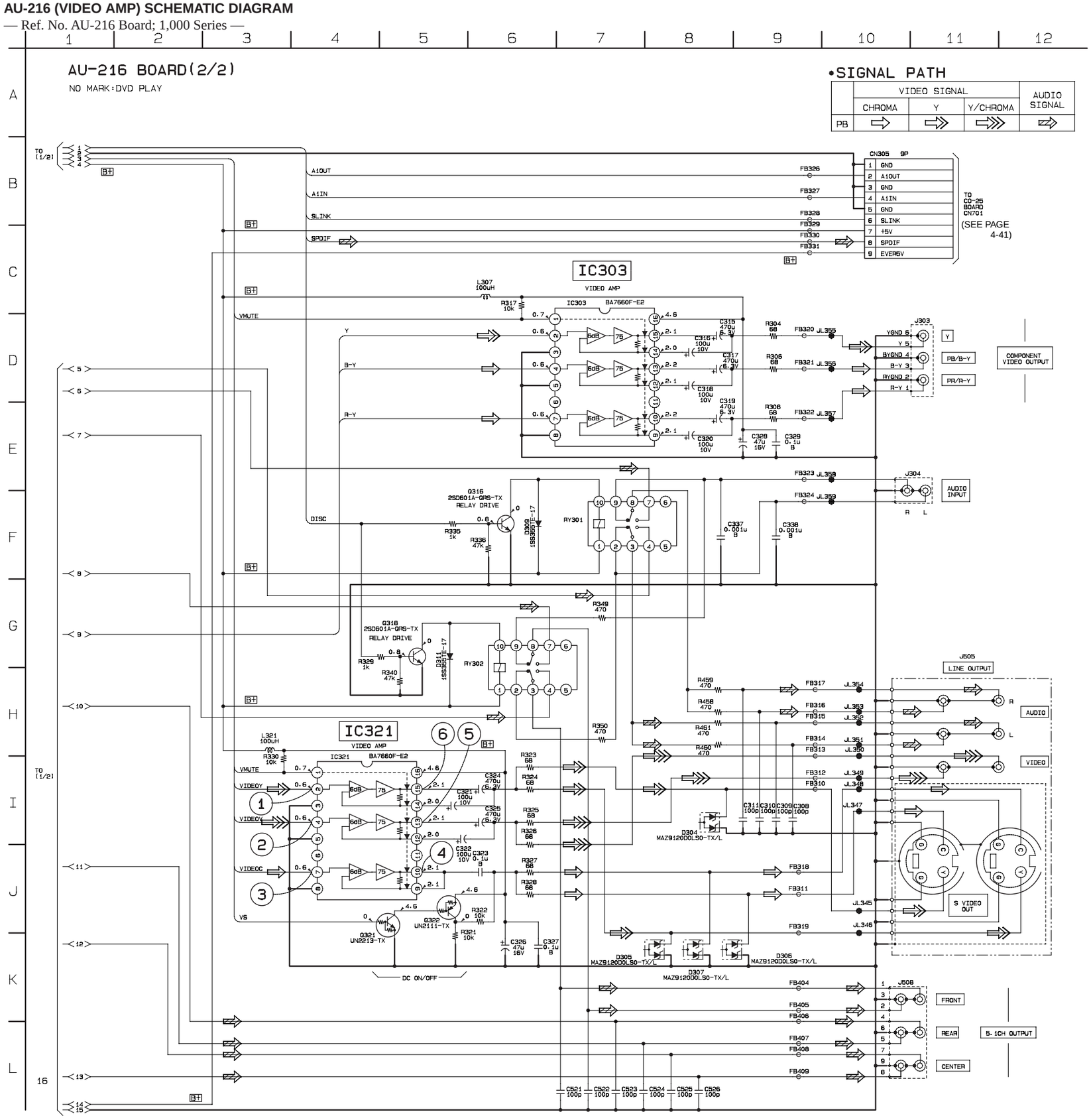



⑤ IC321 ⑬




⑥ IC321 ⑮

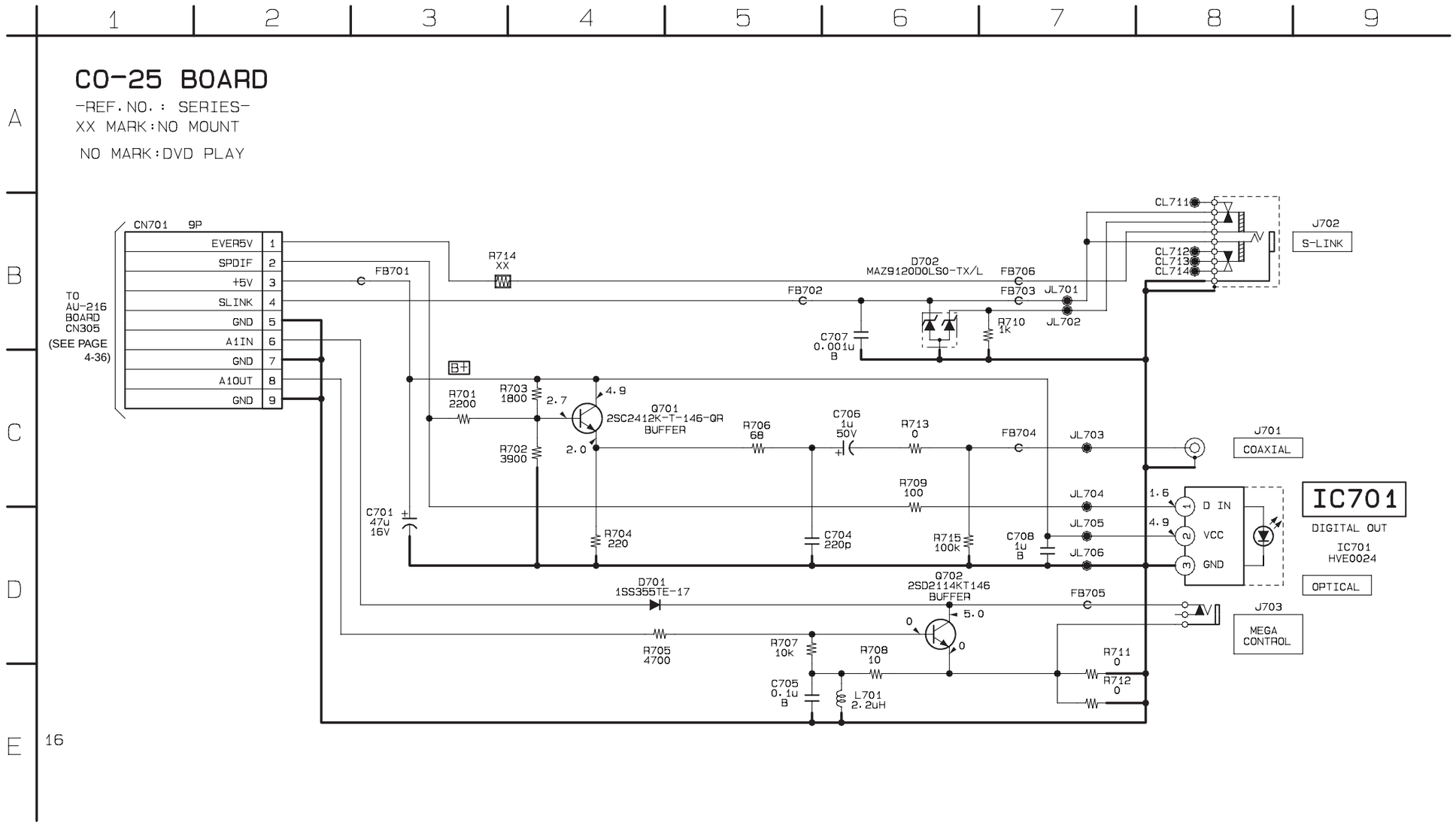



**VIDEO AMP**
**AU-216 (2/2)**

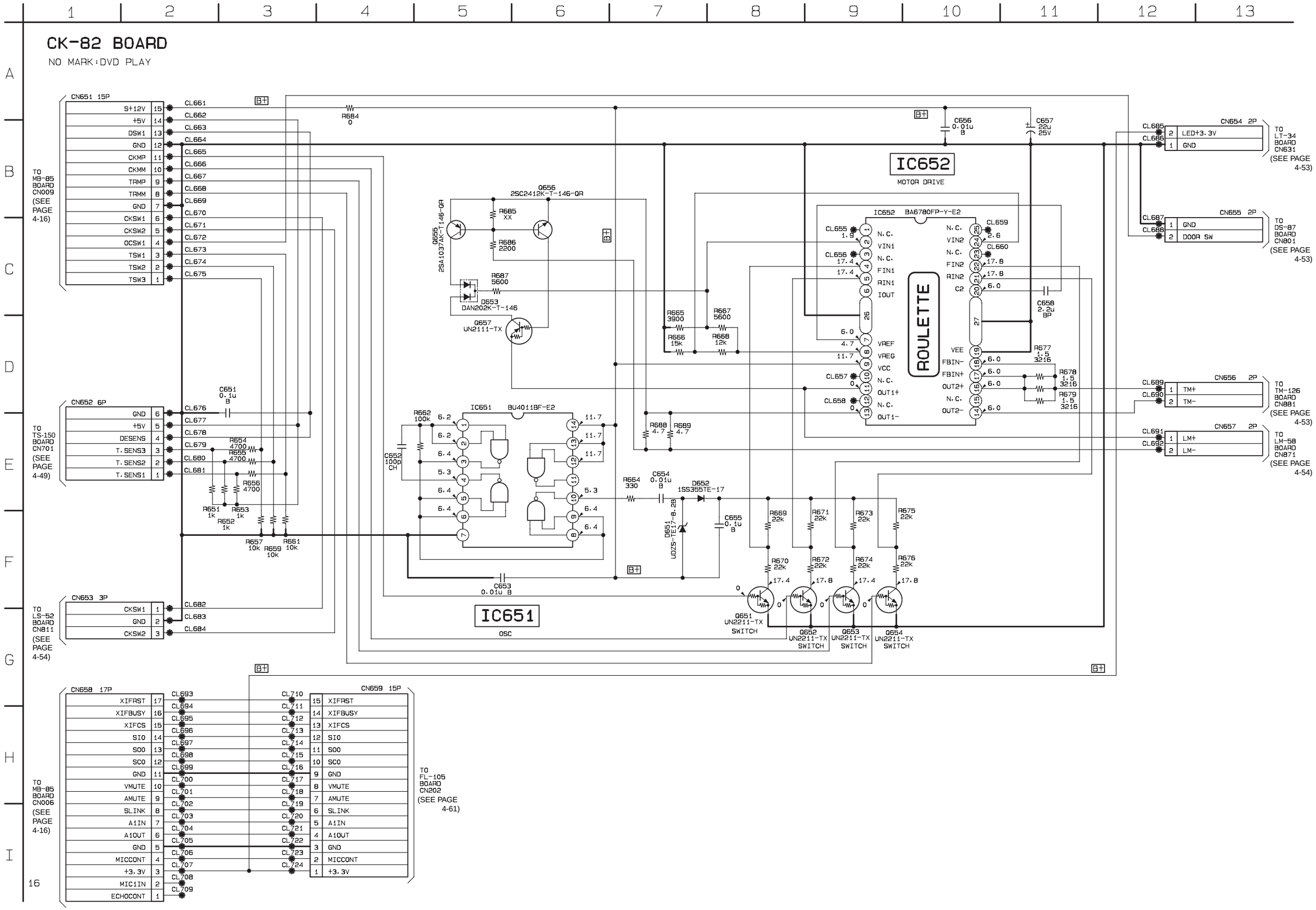
**CO-25 (CONTROL JACK) SCHEMATIC DIAGRAM**

— Ref. No. CO-25 Board; 1,000 Series —



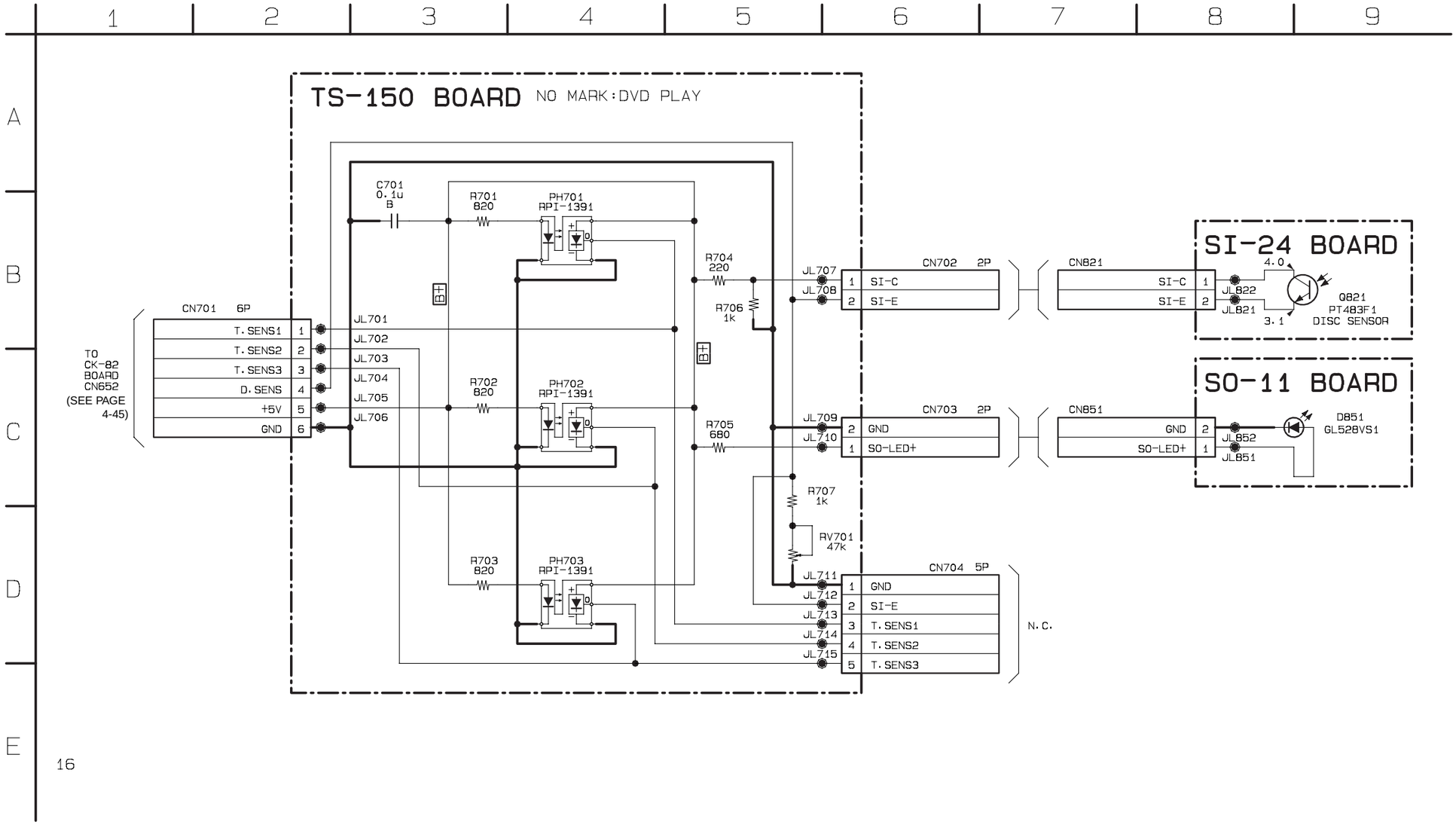
**CK-82 (MOTOR DRIVE) SCHEMATIC DIAGRAM**

— Ref. No. CK-82 Board; 2,000 Series —



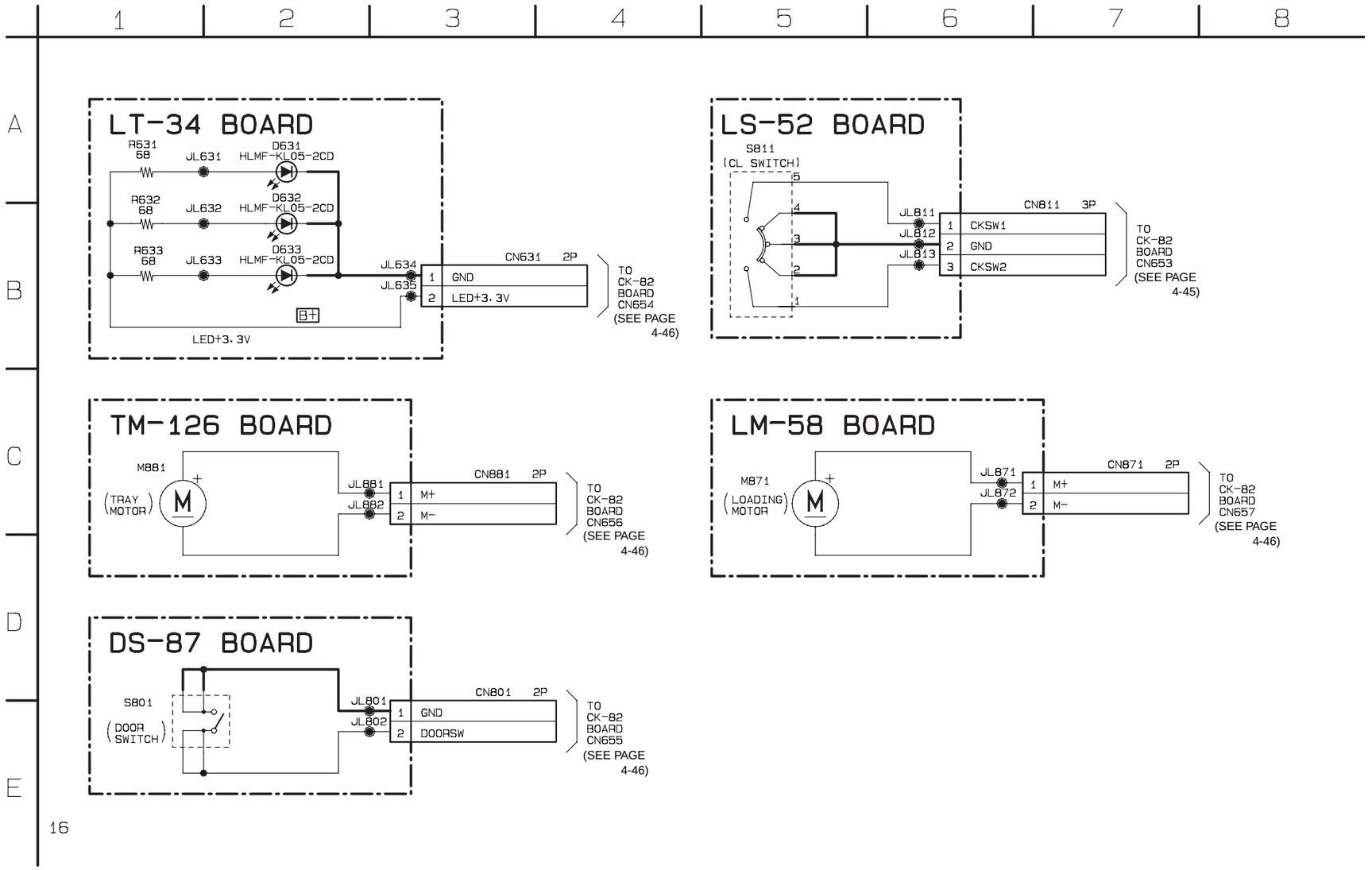
**TS-150 (TABLE SENSOR), SI-24 (SI SENSOR), SO-11 (SO LED) SCHEMATIC DIAGRAMS**

— Ref. No. TS-150, 6,000 SI-24, SO-11 Board; 1,000 Series —



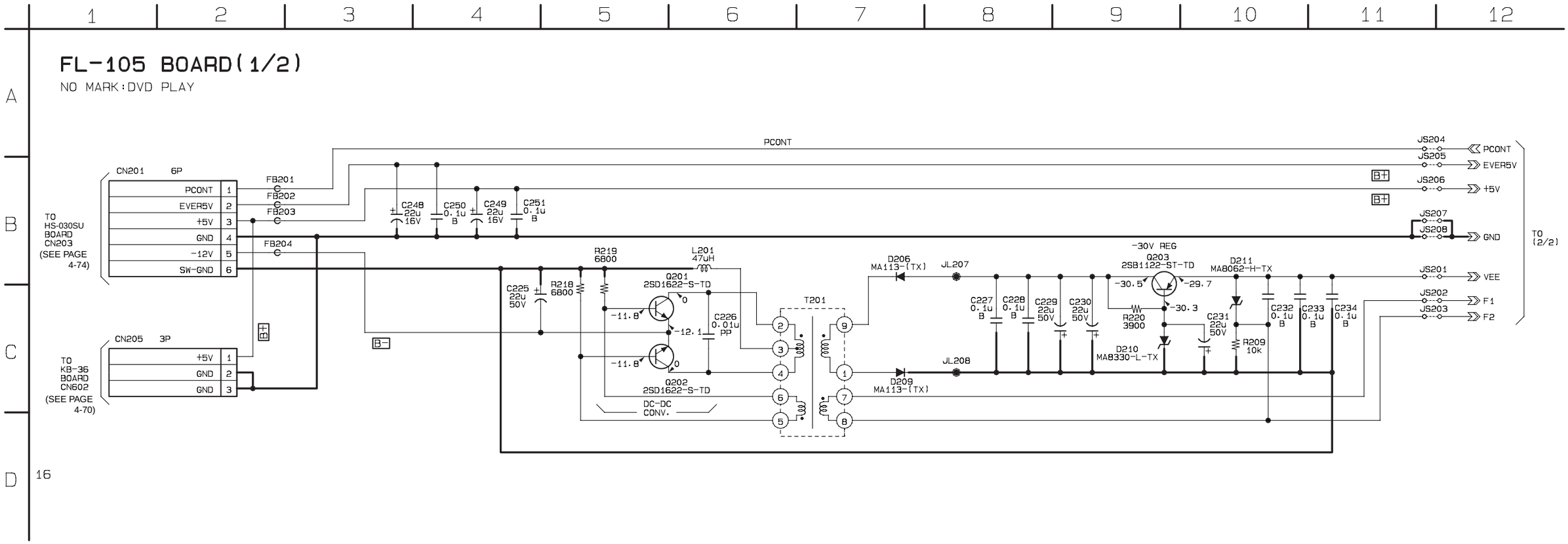
**LT-34 (TABLE LED), TM-126 (TABLE MOTOR), DS-87 (DOOR SWITCH), LS-52 (CHACK SENSOR), LM-58 (LOADING MOTOR) SCHEMATIC DIAGRAMS**

— Ref. No. LT-34, TM-126, DS-87, LS-52, LM-58 Board; 1,000 Series —



**FL-105 (DC-DC CONVERTER) SCHEMATIC DIAGRAM**
— Ref. No. FL-105 Board; 3,000 Series —

**For schematic diagram**
• Refer to page 4-55 for printed wiring board.

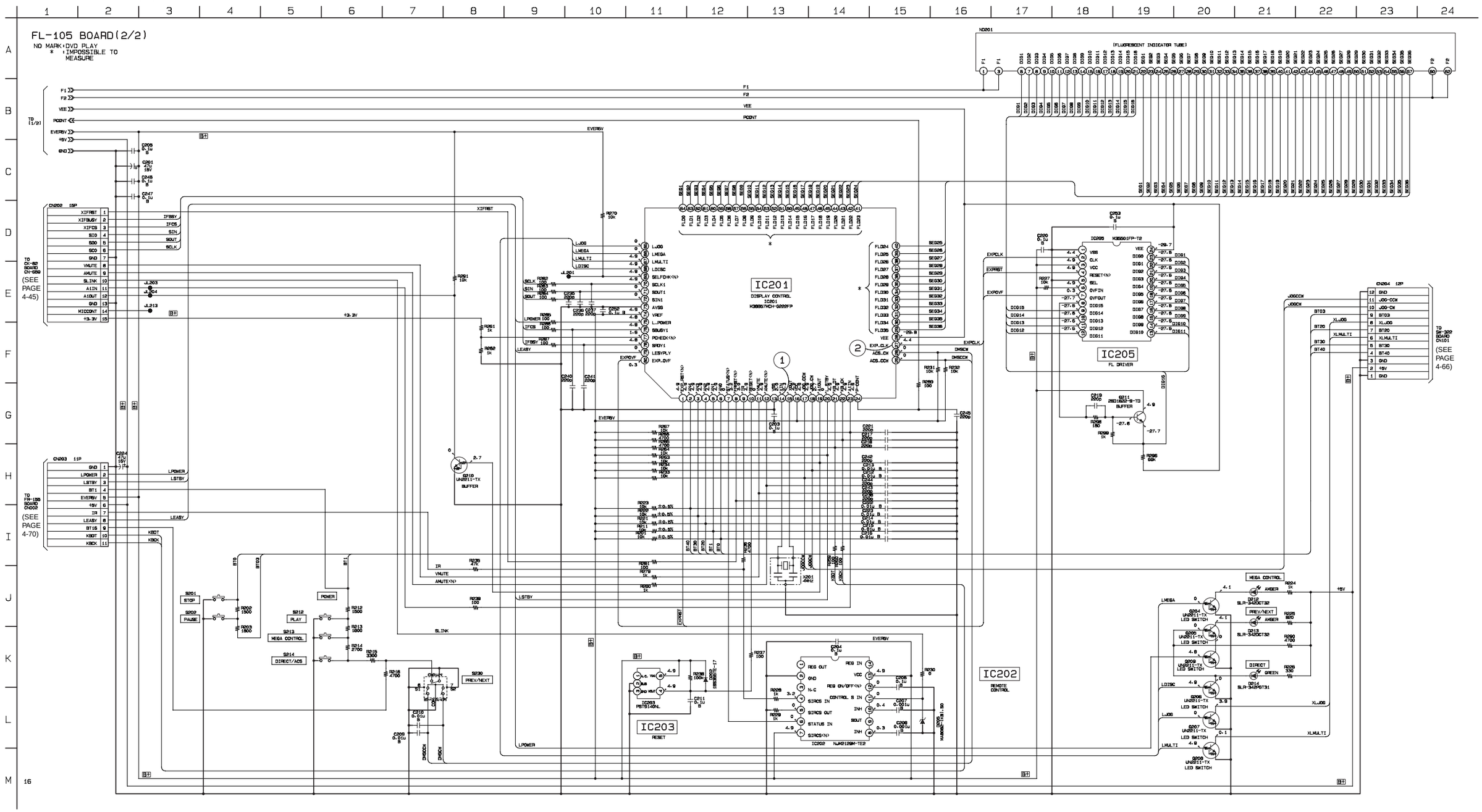


## FL-105 (DISPLAY CONTORL) SCHEMATIC DIAGRAM

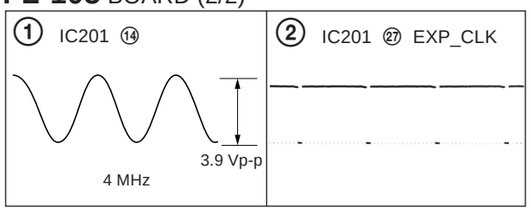
— Ref. No. FL-105 Board; 3,000 Series —

**For schematic diagram**

• Refer to page 4-55 for printed wiring board.

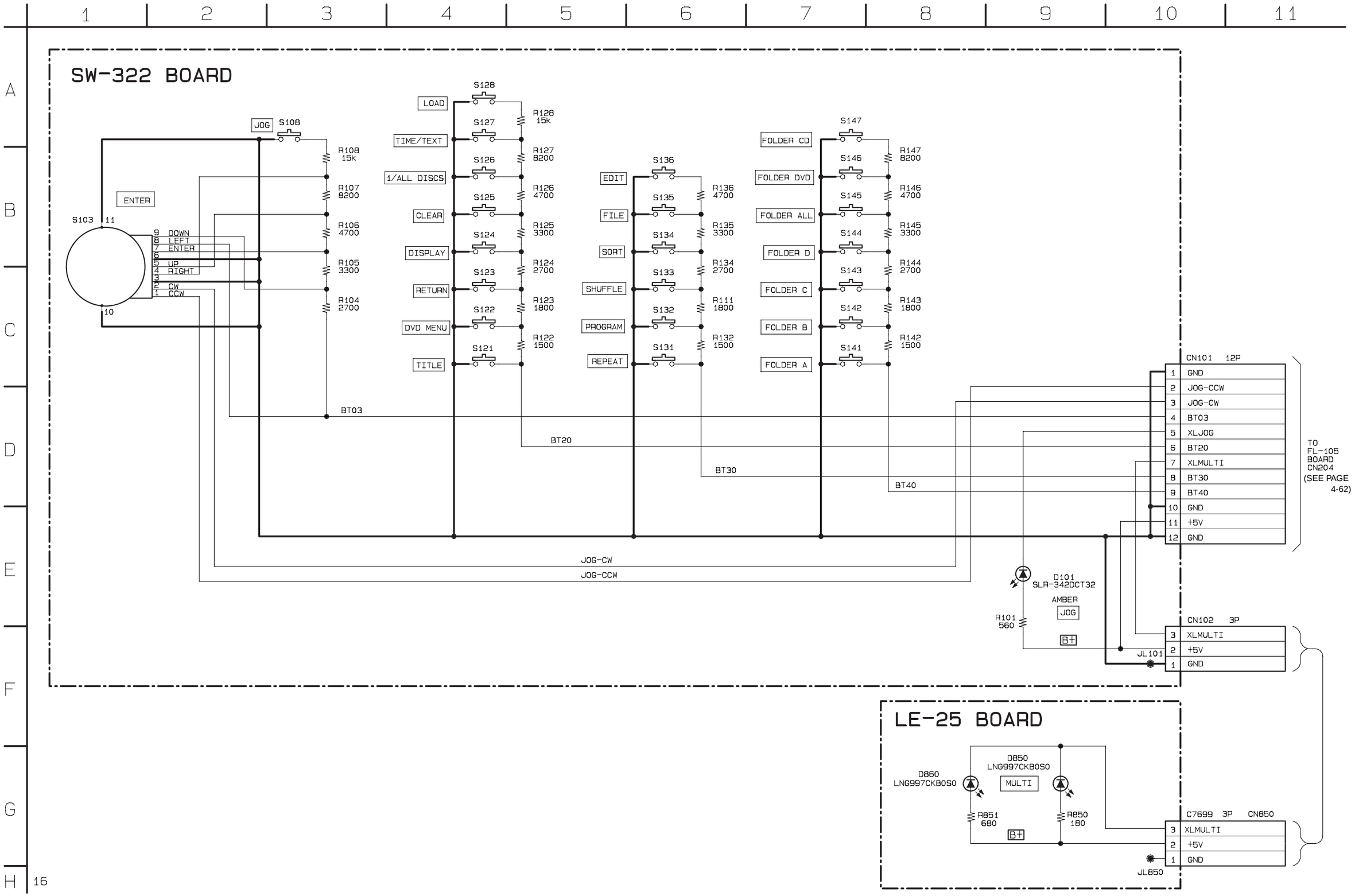



## FL-105 BOARD (2/2)



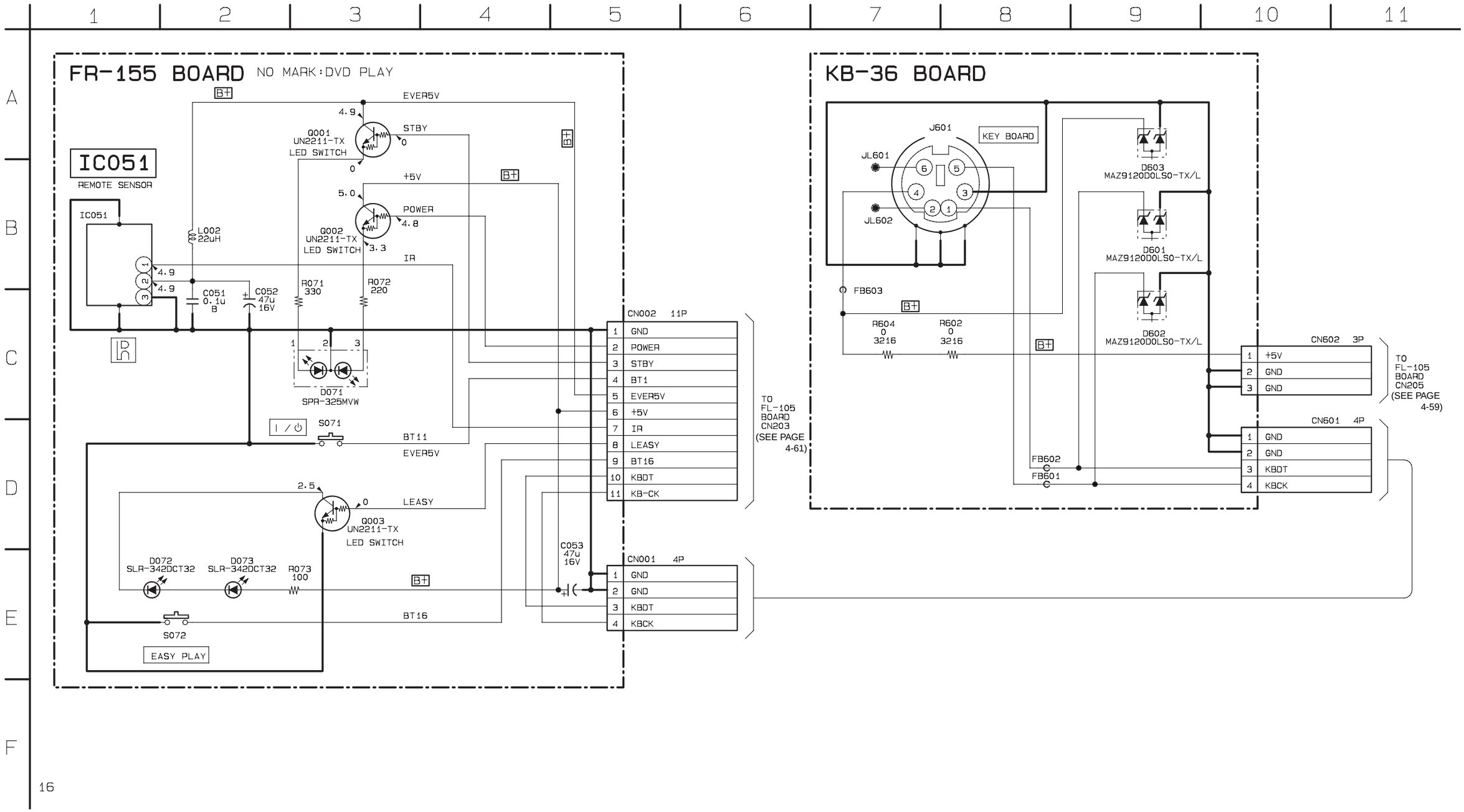
**SW-322 (SURROUND SWITCH), LE-25 (MULTI LED) SCHEMATIC DIAGRAMS**

— Ref. No. SW-322, LE-25 Board; 1,000 Series —



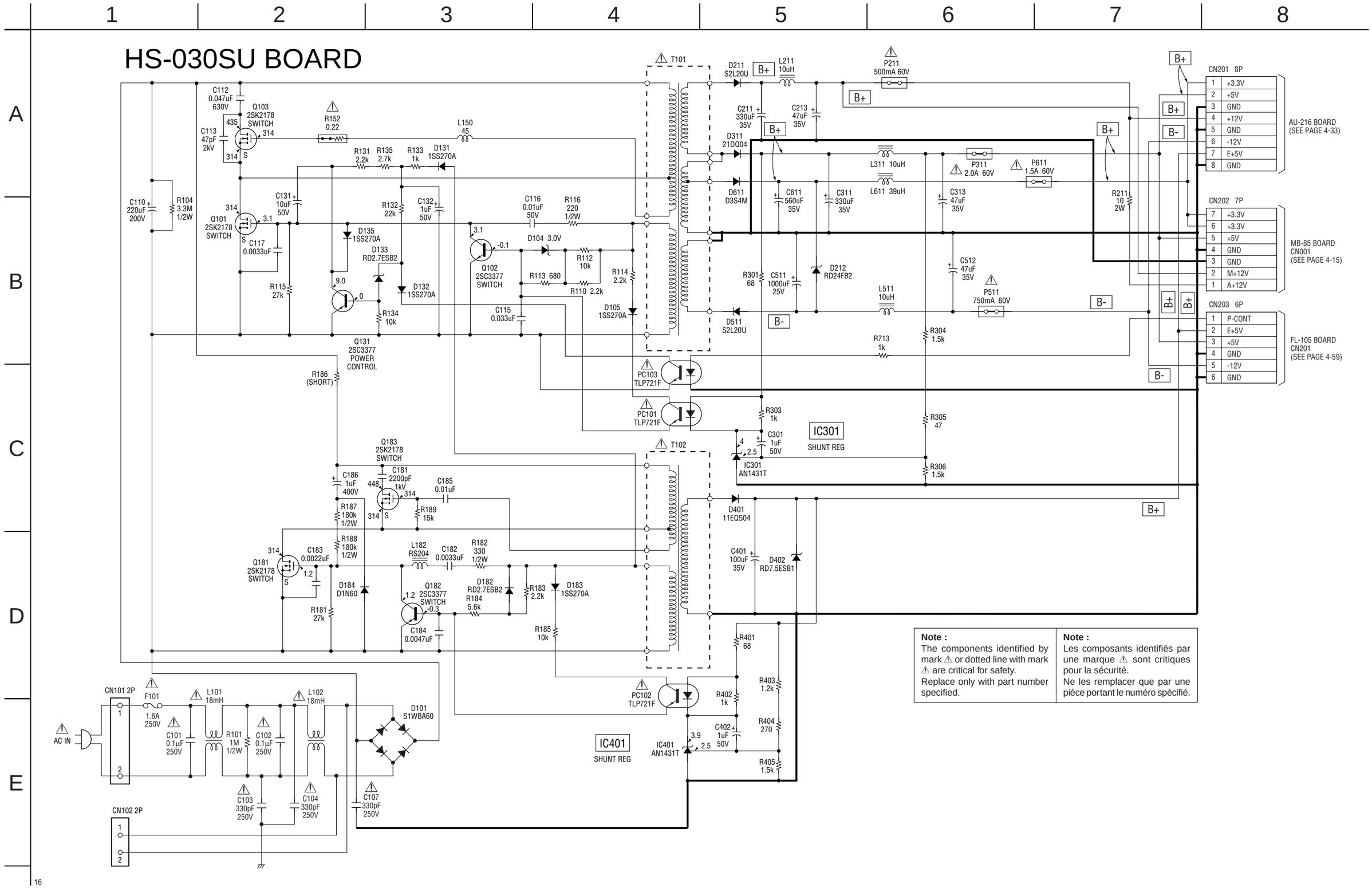
**FR-155 (IR/POWER SWITCH), KB-36 (KEY BOARD JACK) SCHEMATIC DIAGRAMS**

— Ref. No. FR-155, KB-36 Board; 1,000 Series —



**HS-030SU (SWITCHING REGULATOR) SCHEMATIC DIAGRAM**

— Ref. No. HS-030SU Board; 7,000 Series —




**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**Note :**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.